



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,973	06/17/2002	Stefan Grimm	100564-00107	9410

6449 7590 06/03/2005

ROTHWELL, FIGG, ERNST & MANBECK, P.C.  
1425 K STREET, N.W.  
SUITE 800  
WASHINGTON, DC 20005

EXAMINER

DAVIS, MINH TAM B

ART UNIT	PAPER NUMBER
----------	--------------

1642

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/069,973

Applicant(s)

GRIMM ET AL.

Examiner

MINH-TAM DAVIS

Art Unit

1642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 63-93 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 63-93 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant cancels claims 1-62 and adds new claims 63-93.

The addition of new claims 63-93 requires new restriction requirement.

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 63-65, 69-71, 72-74, drawn to a method for inhibition of apoptosis, or for treating a disease, wherein said disease is a neurodegenerative disease, and wherein the inhibition is at the protein level, comprising contacting a cell with an inhibitor of the activity of adenine nucleotide translocase-1 (ANT-1).

Group II, claims 63-65, 66-68, 72-74, drawn to a method for inhibition of apoptosis, or for treating a disease, wherein said disease is a neurodegenerative disease, and wherein the inhibition is at the nucleic acid level, comprising contacting a cell with an inhibitor of the activity of adenine nucleotide translocase-1 (ANT-1).

Group III, claims 63-65, 66-68, 72-73, 75, drawn to a method for inhibition of apoptosis, or for treating a disease, wherein said disease is a dilated cardiomyopathy, and wherein the inhibition is at the nucleic acid level, comprising contacting a cell with an inhibitor of the activity of adenine nucleotide translocase-1 (ANT-1).

Art Unit: 1642

Group IV, claims 63-65, 69-71, 72-73, 75, drawn to a method for inhibition of apoptosis, or for treating a disease, wherein said disease is a dilated cardiomyopathy, and wherein the inhibition is at the protein level, comprising contacting a cell with an inhibitor of the activity of adenine nucleotide translocase-1 (ANT-1).

Group V, claims 76-87, drawn to a method for identifying substances that inhibit the activity of ANT-1.

Group VI, claims 88-91, drawn to a nucleic acid inhibitor of ANT-1 activity, as disclosed in the specification.

Group VII, claims 88-91, drawn to a polypeptide or peptide inhibitor of ANT-1 activity, as disclosed in the specification.

Group VIII, Group VI, claims 88-91, drawn to an inhibitor of ANT-1 activity, which are not nucleic acid, nor polypeptide, as disclosed in the specification.

Group IX, Claim 92, drawn to a method for diagnosis of an apoptosis process in a degenerative disease, wherein said disease is a neurodegenerative disease, as disclosed in the specification, comprising detecting the mRNA level of expression of ANT-1.

Group X, Claim 92, drawn to a method for diagnosis of an apoptosis process in a degenerative disease, wherein said disease is a neurodegenerative disease, as disclosed in the specification, comprising detecting the protein level of expression of ANT-1.

Art Unit: 1642

Group XI, Claims 92-93, drawn to a method for diagnosis of an apoptosis process in a degenerative disease, wherein said disease is dilated cardiomyopathy, comprising detecting the mRNA level of expression of ANT-1.

Group XII, Claims 92-93, drawn to a method for diagnosis of an apoptosis process in a degenerative disease, wherein said disease is dilated cardiomyopathy, comprising detecting the protein level of expression of ANT-1.

The inventions listed as Groups I-XII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

According to PCT Rule 13.2, unity of invention exists only when the shared same or corresponding technical feature is a contribution over the prior art. The inventions listed as groups 1-3 do not relate to a single general inventive concept because their same or corresponding technical feature is not a contribution over the prior art.

The technical feature of group 1 is inhibition of apoptosis by administration of an inhibitor of ANT-1, which is known in the art. Fulda et al, Cancer Res, 1998, 58(19): 4453-60, of record, teach that apoptosis in neuroblastoma cells is inhibited by bongkreikic acid, which is an inhibitor of ANT-1, as taught by Pei, YZ et al, 2003, Synthesis-Stuttgart, 11, SI, pages 1717-1721, of record. Thus group 1 as a whole lacks novelty or inventive step, and does not make a contribution over the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-TAM DAVIS whose telephone number is 571-272-0830. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JEFFREY SIEW can be reached on 571-272-0787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MINH TAM DAVIS

May 20, 2005

SUSAN UNGAR, PH.D.  
PRIMARY EXAMINER  
